

What is claimed is:

1 1. A liquid crystal display (LCD) device comprising:
2 first and second substrates;
3 a thin film transistor (TFT) formed in a predetermined
4 region on the first substrate;
5 a pixel electrode formed in a pixel region on the first
6 substrate;
7 a color filter layer formed on the pixel electrode;
8 a black matrix pattern formed in a region other than
9 the pixel electrode; and
10 a liquid crystal layer formed between the first and
11 second substrates.

1 2. The LCD device of claim 1, further comprising a common
2 electrode formed on the second substrate.

1 3. The LCD device of claim 1, wherein the black matrix
2 pattern is Benzocyclobutene (BCB).

1 4. The LCD device of claim 1, wherein the TFT is formed in
2 a crossing region between a gate line and a data line on the
3 first substrate.

1 5. The LCD device of claim 4, further comprising a
2 connecting pattern which electrically connects a drain

3 electrode of the TFT with the data line.

1 6. The LCD device of claim 5, wherein the connecting
2 pattern is removed after the color filter layer is formed.

1 7. The LCD device of claim 5, wherein the connecting
2 pattern passes above the gate line.

1 8. The LCD device of claim 5, wherein the connecting
2 pattern forms a single body with the data line and the drain
3 electrode.

1 9. The LCD device of claim 1, wherein the black matrix
2 pattern is used as a passivation film.

1 10. A method for manufacturing a liquid crystal display
2 (LCD) device having a pixel region defined by gate and data
3 lines, the method comprising:

4 forming a thin film transistor (TFT) on a first
5 substrate;

6 forming a black matrix pattern in a region other than
7 the pixel region;

8 forming a pixel electrode in the pixel region; and
9 forming a color filter layer on the pixel electrode.

1 11. The method of claim 10, further comprising:

2 forming a common electrode on a second substrate
3 opposite to the first substrate; and
4 forming a liquid crystal layer between the first and
5 second substrates.

1 12. The method of claim 10, wherein forming the TFT
2 includes:
3 forming a gate electrode on the first substrate;
4 sequentially depositing a gate insulating film, an a-Si
5 layer, an n+ layer, and a metal layer on an entire surface
6 including the gate electrode;
7 patterning the metal layer and the n+ layer;
8 selectively removing the patterned metal layer to form
9 source and drain electrodes; and
10 removing the n+ layer between the source and drain
11 electrodes and the gate insulating film in a pad region.

1 13. The method of claim 12, wherein the a-Si layer of the
2 pixel region is removed when the black matrix pattern is
3 formed.

1 14. The method of claim 10, wherein the black matrix
2 pattern is Benzocyclobutene (BCB).

1 15. The method of claim 14, wherein the black matrix
2 pattern is used as a passivation film.

1 16. The method of claim 10, further comprising:
2 removing the black matrix pattern in a pad region after
3 forming the color filter layer; and
4 forming a binder on the color filter layer and the
5 black matrix pattern.

1 17. A method for manufacturing a liquid crystal display
2 (LCD) device having a pixel region defined by gate and data
3 lines, the method comprising:
4 forming a thin film transistor (TFT) on a first
5 substrate;
6 forming a pixel electrode in the pixel region;
7 forming a black matrix pattern in a region other than
8 the pixel electrode; and
9 forming a color filter layer on the pixel electrode.

1 18. The method of claim 17, wherein forming the TFT
2 includes the steps of:
3 forming a gate electrode on the first substrate;
4 depositing a gate insulating film, an a-Si layer, an n+
5 layer, and a metal layer on an entire surface including the
6 gate electrode;
7 patterning the metal layer, the n+ layer, and the a-Si
8 layer;
9 selectively removing the patterned metal layer to form

10 source and drain electrodes; and
11 removing the n+ layer between the source and drain
12 electrodes and the gate insulating film in a pad region.

1 19. The method of claim 17, further comprising the steps
2 of:

3 forming a common electrode on a second substrate
4 opposite to the first substrate; and
5 forming a liquid crystal layer between the first and
6 second substrates.

1 20. The method of claim 17, wherein the black matrix
2 pattern is Benzocyclobutene (BCB).

1 21. The method of claim 20, wherein the black matrix
2 pattern is used as a passivation film.

1 22. The method of claim 17, further comprising:
2 removing the black matrix pattern in a pad region after
3 forming the color filter layer; and
4 forming a binder on the color filter layer and the
5 black matrix pattern.

1 23. A method for manufacturing a liquid crystal display
2 (LCD) device having a pixel region defined by gate and data
3 lines, the method comprising:

4 forming a thin film transistor (TFT) and a connecting
5 pattern on a first substrate, the connecting pattern
6 connecting a drain electrode of the TFT with one of the data
7 lines;
8 forming a pixel electrode connected with the drain
9 electrode;
10 forming a black matrix pattern in a region other than
11 the pixel region;
12 forming a color filter layer on the pixel electrode;
13 and
14 forming a liquid crystal layer between the first
15 substrate and a second substrate opposite to the first
16 substrate.

1 24. The method of claim 23, wherein forming the TFT and the
2 connecting pattern includes:
3 forming a gate electrode on the first substrate;
4 depositing a gate insulating film, an a-Si layer, an n+
5 layer, and a metal layer on an entire surface including the
6 gate electrode;
7 patterning the metal layer and the n+ layer;
8 selectively removing the patterned metal layer to form
9 source and drain electrodes; and
10 removing the n+ layer between the source and drain
11 electrodes and the gate insulating film in a pad region.

1 25. The method of claim 24, wherein the connecting pattern
2 is formed to connect the data line with the drain electrode
3 in a bypass way when the metal layer and the n+ layer are
4 etched.

1 26. The method of claim 23, wherein forming the color
2 filter layer includes electrodepositing a color filter
3 material on the pixel electrode in a state that a voltage is
4 applied to the data line.

1 27. The method of claim 26, further comprising:
2 removing the black matrix pattern in a pad region; and
3 forming a binder on the black matrix pattern and the
4 color filter layer.

1 28. The method of claim 23, wherein the black matrix
2 pattern is patterned to expose the connecting pattern.

1 29. The method of claim 28, wherein the connecting pattern
2 is removed after forming the color filter layer.

1 30. The method of claim 23, wherein the step a) includes:
2 forming a gate electrode on the first substrate;
3 depositing a gate insulating film, an a-Si layer, an n+
4 layer, and a metal layer on an entire surface including the
5 gate electrode;

6 patterning the metal layer, the n+ layer, and the a-Si
7 layer;

8 selectively removing the patterned metal layer to form
9 source and drain electrodes; and

10 removing the n+ layer between the source and drain
11 electrodes and the gate insulating film in a pad region.

1 31. The method of claim 30, wherein the connecting pattern
2 is formed when the metal layer, the n+ layer and the a-Si
3 layer are etched.